



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 4  
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ATLANTA GEORGIA 30303-8960

February 28, 2011

Ms. Susan J. Kelly  
Senior Manager  
Tennessee Valley Authority  
400 West Summit Hill Drive  
Knoxville, Tennessee 37902

**Subject: EPA NEPA Review Comments on TVA's DEIS for "Muscle Shoals Reservation Redevelopment"; Colbert County, AL; CEQ #20110006**

Dear Ms. Kelly:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Tennessee Valley Authority (TVA) Draft Environmental Impact Statement (DEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. In this DEIS, TVA proposes the transfer and redevelopment of a 1,400-acre portion of the Muscle Shoals Reservation (MSR). TVA currently controls 2,600-acres of the MSR which is located in Colbert County, Alabama. The MSR is surrounded by the cities of Sheffield, Muscle Shoals, Tuscumbia, and Florence.

**Background on the MSR Site:**

EPA understands from information provided in the DEIS that TVA assumed custody and control of the 2,600-acre MSR in 1933 when it was transferred from the U.S. War Department. The MSR has served several uses over the past 80-plus years including chemical development, research, munitions and fertilizer production. We note that TVA has determined that that a 1,400-acre portion of the MSR is no longer essential to its needs and local government officials and private developers have requested use of this land. EPA also understands from the DEIS that disposing of the selected 1,400-acre portion of the MSR would help reduce TVA's operations and maintenance (O&M) costs, enhance local economic development opportunity, and help TVA reduce its environmental footprint.

**Alternatives:**

In this DEIS, TVA has proposed the following five alternatives:

Alternative A - Under this proposal TVA would not dispose of the 1,400-acre property and would continue to administer and manage it in accordance with the *1996 Muscle*

*Shoals/Wilson Dam Reservation Land Use Plan Final Environmental Assessment (1996 Plan).*

Alternative B - Under this proposal TVA would make the MSR area available for conservation of natural resources and sustainable low-impact development uses. Alternative B is described as the “environmentally” preferred alternative. TVA suggests that this proposal could include, but not limited to, recreation opportunities including: parks, greenways, and trails; nature and historic interpretation; open space; wildlife viewing and management; botanical gardens; nursery and horticulture production areas; green energy research and development; environmental education; and ecotourism. This alternative would propose more open green space than developed areas and TVA would encourage any development under this proposal to have small “environmental footprints.”<sup>1</sup>

Alternative C - Under this proposal TVA would make the MSR area available for a combination of commercial, retail, and residential development purposes. TVA suggest that this proposal could include: high-density businesses, malls, theaters, convenience stores, car washes, gas stations, miniwarehouses or self-storage buildings, retail shopping center developments, community centers, and health, religious, and educational institutions. TVA also suggests that under this proposal development on the MSR site could include: lower-density commercial recreation facilities such as resorts, athletic fields, stadiums, campgrounds, fairgrounds, and parks.<sup>2</sup>

Alternative D - Under this proposal TVA would make the MSR area available for industrial development uses. TVA states that the amount of land to be used by future industries could vary from a few hundred acres to the entire MSR area.<sup>3</sup>

Alternative E – Under this proposal TVA would make the MSR area available for a mixture of conservation and sustainable low-impact development, commercial, retail, residential, and industrial uses. Alternative E is described as the “preferred” alternative for this DEIS. TVA states that this alternative could include a combination of alternatives B through D.<sup>4</sup>

#### **EPA Comments:**

Overall, EPA found this DEIS somewhat difficult to review due to a lack of information regarding the proposed alternatives, although it is understandable since the project is at such a conceptual stage. In accordance with 40 CFR § 1502.22 EPA would recommend that the FEIS provide specific details regarding proposed future zoning and proposed changes to current land uses within the MSR. It is also important for TVA to consider the relevance of the incomplete or unavailable information to evaluating reasonable foreseeable significant adverse impacts on the human environment.

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<sup>1</sup> p.20

<sup>2</sup> p.22

<sup>3</sup> p.22

<sup>4</sup> p.23

### Hazardous Materials and Waste:

The DEIS provides considerable information and details on the hazardous materials and waste history of the MSR. As indicated in the DEIS, “the entire MSR study area plus additional lands north of Reservation Road (2,260 acres) is currently subject to Alabama Department of Environmental Management (ADEM) HSWA Permit/USEPA ID Number AL3 640 090 004.”<sup>5</sup> It is EPA’s understanding, based on review of the DEIS, that ADEM provided the following guidance regarding the disposal and transfer of the MSR study area:

1. The footprint or permitted area cannot be reduced until TVA has a buyer for the property and that part of the RCRA permitted area is no longer owned by TVA.
2. The RCRA HSWA Permit should not encumber the sale of any property; however, no land can be sold or transferred from within the existing permit area unless remediated to a level that would allow unrestricted use or transferred with appropriate covenants to protect human health and the environment. Such environmental covenants are outlined in ADEM Administrative Code Chapter 335-5-1 and are attached to and run with the land. Examples of covenants include groundwater development restrictions, use controls, engineering controls, and exclusion requirements. ADEM has authority through the civil court system to enforce these types of covenants.
3. A legal description of the land by survey would be required, and the covenants would be filed with the County Probate Office, pursuant to Section 12 of the Alabama Uniform Environmental Covenants Act.
4. Once a parcel of land is sold, TVA would submit a minor permit modification that indicates the land is no longer owned by the United States and under the custody and control of TVA.
5. Sites without any existing hazardous waste could be removed from the permit. Although it is not TVA’s intent, if land containing hazardous waste (i.e., the four SWMUs included in the ongoing post-closure monitoring program) is transferred, the RCRA HSWA Permit would also be transferred to the new owner. The new owner would then be required to meet the financial obligations outlined in RCRA. Presently, government agencies are exempt from the financial obligation requirements.

EPA concurs with ADEM’s above listed guidance for disposal of lands on the MSR.

### Wetlands:

The total wetland acres identified in the MSR are 164 acres with Forested wetlands making up the majority of the total (113 acres).<sup>6</sup> Wetlands and streams constitute 11.5% of the MSR property.

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<sup>5</sup> P. 139

<sup>6</sup> p. 180

As stated in the DEIS, "In accordance with TVA procedures for implementing EO 11990 in *Instruction IX, Environmental Review* (TVA 1983), TVA must evaluate the effect of the proposed action on natural and beneficial wetland values and alternatives that would eliminate or minimize such effects. TVA must then determine whether there is a practicable alternative that will avoid affecting wetlands. If there is no practicable alternative to development in wetlands, then all practical measures to minimize impacts to wetlands must be incorporated into plans to develop these areas. TVA does not transfer federally owned wetlands to nonfederal ownership without assurances that future impacts from development would be avoided or minimized.<sup>7</sup>" To ensure wetlands are protected on the MSR during future development, EPA recommends TVA place these aquatic systems under the protection of a perpetual restrictive covenant or conservation easement before the land is transferred to new ownership. This would appear to be consistent with the above referenced policy. EPA recommends that TVA coordinate closely with the U.S. Army Corps of Engineers (COE) regarding the Nashville Corps District standards for establishment of restrictive covenants and conservation easements. EPA also recommends that a minimum 25-foot upland riparian buffer be included in the protection instrument. If this is not an option, EPA recommends that additional information be provided in the FEIS regarding potential mitigation options that TVA would consider if no practicable alternatives can be identified to prevent adverse impacts to wetlands on the MSR. TVA should coordinate closely with the COE, regarding the probable need for wetland compensation for this proposed action. If possible, section 404 permitting should be summarized in the FEIS.

#### Natural Resources:

In general EPA finds it difficult to determine the potential impacts to natural resources such as aquatic ecology, terrestrial ecology, wildlife, vegetation and natural areas at the MSR due to the lack of information provided in the DEIS. When referring to potential wetland functional losses it is stated in the DEIS that "Because specific project details are unknown at this time, this loss is difficult to quantify."<sup>8</sup> EPA has concerns that impacts to natural resources could range from minimal to significant based on final land use decisions at the MSR. EPA recommends that once final decisions are made with regards to land use changes at the MSR, impacts to natural resources be re-assessed in the FEIS.

#### Natural / Recreational Areas:

EPA notes from the DEIS that the area identified as the "Informal Recreation and Wildlife Observation Area"<sup>9</sup> provides an area for locals to hike and observe wildlife. This area also attracts bird-watchers from around the Southeast during the fall months. EPA would recommend that TVA specifically protect these type areas from future development. Since the preferred alternative is described as the "mix use" alternative it would appear that designating such areas as natural or recreational areas could be accommodated within this alternative. In addition, EPA would support the preservation

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<sup>7</sup> p. 101

<sup>8</sup> p. 182

<sup>9</sup> p. 121

of these areas which would minimize the loss of forested areas located on the MSR. EPA's concerns are consistent with the scoping comments provided for this project in which sixty-five percent of the participants focused on vegetation and wildlife as their primary concern.<sup>10</sup> EPA recommends that the FEIS include specific details regarding areas to be designated and protected as natural and recreational areas.

#### Water Quality:

Pond Creek is located along the eastern section of the MSR and flows north somewhat parallel with Wilson Dam Road. Pond Creek is on the 2010 ADEM 303(d) list for not meeting its designated use of Agricultural & Industrial and is impaired for nitrogenous biological oxygen demand (NBOD), carbonaceous biological oxygen demand (CBOD), arsenic, mercury, and cyanide. TMDLs are scheduled for development for Pond Creek in 2011 and 2016.<sup>11</sup> Since the preferred alternative is described as the "mix use" alternative, future land use decisions such as designating areas suitable for industrial or agricultural use could potentially exacerbate the impaired condition of Pond Creek. EPA recommends that TVA clearly identify in the FEIS what types of land uses will be permitted in areas of the MSR that could potentially negatively impact Pond Creek. EPA also recommends that TVA coordinate with ADEM regarding land use decisions that could negatively impact Pond Creek.

#### Historic and Archaeological Resources:

Several historic buildings and structures eligible for listing in the National Register of Historic Places (NRHP) are located on the MSR. Based on a previous archeological survey conducted on the MSR property<sup>12</sup> consultants recommended that most of the MSR study area be designated as the Muscle Shoals Historic District (MSHD). Their recommendation was based on the large number of buildings and structures that demonstrated significant historic events associated with the area. The MSHD was recognized by the Alabama State Historic Preservation Officer (SHPO) in October 2007 as eligible for listing in the NRHP. Under the alternatives analysis chapter (Chapter 4) no discussion is provided regarding the MSHD. EPA recommends that the FEIS provide additional information regarding the impact of the alternatives on the newly designated MSHD and if/how this designation will impact future land use decisions within the MSR.

EPA also understands from the DEIS that a memorandum of agreement (MOA) between TVA and the Alabama SHPO will be completed and executed prior to the transfer of property within the MSR study area and that TVA will adhere to the stipulations in the final executed MOA<sup>13</sup>. It appears from the DEIS that TVA has had significant correspondence and discussion with the Alabama SHPO regarding the MSR area. EPA recommends that TVA provide additional details regarding the MOA between TVA and the Alabama SHPO in the FEIS; and the effect of the MOA on land use decisions.

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<sup>10</sup> Muscle Shoals Reservation Redevelopment EIS Scoping Report – December 2009

<sup>11</sup> 2010 ADEM 303(d) List

<sup>12</sup> Pietak et al. 2002

<sup>13</sup> p. S-14

### Traffic:

Based on review of the DEIS it is apparent that the level of service (LOS) failures along Hatch Boulevard at Jackson Highway and Reservation Road are severe. It also appears from TVA's traffic study that "the transportation impacts of redevelopment of the MSR study area from Alternatives C and E would be greater compared to Alternatives B and D because these alternatives would likely generate more trips to and from the MSR study area."<sup>14</sup> Since Alternative E is the TVA preferred alternative, which would further degrade LOS, the following mitigation strategies are proposed.

**Option 1:** Realign the US 43/72 designation through Hatch Boulevard and relocate Jackson Boulevard to Birmingham Road.

**Option 2:** Incorporate an additional access point to the MSR between the Tennessee River and Hatch Boulevard and construct grade-separated flyover for southbound US 43/72 through traffic at Hatch Boulevard.

EPA recommends that the FEIS provide additional information on how these traffic mitigation strategies will be funded and how the cost of these mitigation strategies factors into the selection of the preferred alternative. EPA also recommends that the FEIS include a clearer discussion on how the LOS failures were determined for such conceptual plans (i.e. How were future traffic counts predicted for the proposed alternatives?). Based on review of Table S-1 (Summary of Potential Effects by Alternatives) it appears that all alternatives have a similar impact on transportation, but after reviewing section 4.17 it is clear that this is not the case. EPA recommends that the FEIS provide a clearer description of the potential traffic related impacts in all summary tables in the document.

### Environmental Justice:

According to the DEIS, the minority population is lower in Colbert County and the Impact Area compared to the State of Alabama and the U.S. The DEIS also examined the minority populations in Census Tracts 207.01 and 207.02 and the blocks immediately around the site. The Census Tracts and blocks also showed minority populations below the County, State and National Average. Colbert County's poverty level is lower than the impact area and State, but is similar to the poverty level nationally.<sup>15</sup> However, table 3-8 also indicates that the average income levels in Colbert County and in the impact area are lower than the State of Alabama and national levels.

The DEIS indicates that a public scoping meeting was held to discuss TVA's land disposal and redevelopment proposal during 2009. About 100 people participated in the public meeting held at Muscle Shoals High School and about 90 comments were received by 82 commenters. Section 3.6 of the Environmental Justice Section indicates that public

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<sup>14</sup> p.205

<sup>15</sup> Table 3-10

comments were considered and included in a final scoping report and posted on the project website. However, a synopsis of this information was not included in the DEIS nor was there any discussion regarding any specific efforts that may have been used to target low-income and/or minority populations. EPA recommends that the EJ/Public Involvement section of the EIS include a summary of the public comments and concerns, TVA's response to them and any efforts used to specifically engage potential EJ populations in the public involvement process. In addition, the projects website address should be included in the EJ section for residents that are interested in more detailed information. Every effort should be made to involve potential EJ populations in the planning and decision-making process.

Evaluating the impact of the potential project on low-income or minority populations is difficult based on the lack of detailed or definitive future land-use plans. It is unclear how these residents are currently utilizing this land--subsistence fishing, agriculture, etc. EPA appreciates the efforts made by TVA to conceptually and qualitatively discuss potential impacts and benefits posed by each of the alternatives.

#### Stormwater / Low Impact Development (LID)

EPA notes that the DEIS includes several references to LID practices but provides little detail on what type of LID practices would be proposed for the different alternatives. EPA strongly encourages the incorporation of LID practices for re-development of the MSR. LID practices minimize environmental impact of development by employing principles such as preserving and recreating natural landscape features, minimizing effective imperviousness by creating functional and appealing site drainage that treats stormwater as a resource rather than a waste product. EPA recommends that the FEIS include additional detail on how TVA will require incorporation of LID practices into future design projects at the MSR, what LID practices will be required, and proposed locations of LID projects within the MSR. EPA applauds TVA's efforts to incorporate LID into the design of the MSR project, and encourages TVA to work with the local Municipal Separate Storm Sewer System (MS4) program to incorporate LID practices into all phases of the redevelopment of this area. TVA has an opportunity to guide the redevelopment of the MSR which could be a model for the region for redeveloping federal lands in an environmentally responsible manner.

#### Cumulative Impact Analysis:

EPA notes that the DEIS includes discussion of cumulative impacts for some but not all of the affected environmental sections. EPA also notes that cumulative impacts are not discussed in the context of the alternatives. For example, under the wetlands discussion in the Chapter 4, a separate discussion is provided for cumulative impacts, but not in the context of the alternatives. Losses of forested wetlands under Alternative D may be significantly greater than under Alternative B and would potentially have an overall greater cumulative impact on this resource. We recommend that the FEIS include a cumulative impact discussion for all affected environment sections and that the discussion provides specifics how cumulative impacts will differ under the different

alternatives. EPA also notes that cumulative impacts are not included in the "Summary of Potential Effects by Alternative" table.<sup>16</sup> EPA recommends that cumulative impacts be included in this table in the FEIS.

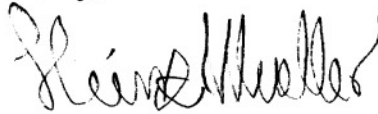
### **EPA DEIS Rating**

Since the DEIS is very conceptual it is difficult to determine the true environmental impact of any of the alternatives, but overall EPA supports TVA's approach to designating areas of the MSR for conservation and utilizing environmentally responsible development practices such as LID. We hope that conservation of high quality natural areas will be a priority for future land use decisions at the MSR.

We rate this DEIS as an "EC-2" (i.e., Environmental Concern, additional information requested). We primarily base this rating on the lack of information regarding the future land use plans for the MSR and are requesting additional information.

EPA appreciates the opportunity to review the DEIS. Should TVA have questions regarding our comments, please feel free to contact Dan Holliman of my staff at 404/562-9531 or [holliman.daniel@epa.gov](mailto:holliman.daniel@epa.gov).

Sincerely,



Heinz J. Mueller  
Chief, NEPA Program Office  
Office of Policy and Management

*Enclosure: Summary of Rating Definitions*

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<sup>16</sup> p. S-5